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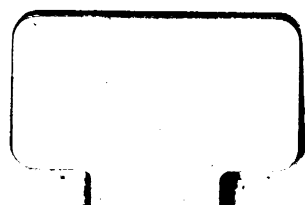
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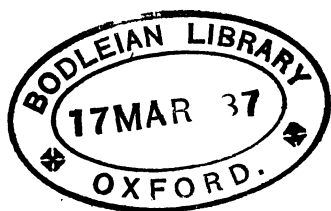
A BRIEF INQUIRY  
CONCERNING  
HUMAN KNOWLEDGE & BELIEF;  
WITH SOME REMARKS  
UPON  
THE BASIS OF PHYSICS:  
BEING A SEQUEL  
TO  
"A GENERAL VIEW OF THE MATERIALISTIC  
PHILOSOPHY."

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# Human Knowledge and Belief.

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"The seeing eye disturbs not the unseen; the hearing ear lists not the song of songs; the heart's conceptions are beggared by simple truth; and man, athwart all revelations, must wait upon his God."—GARTH WILKINSON.

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What are we human beings, is the first question that presents itself to us in thinking. What shall we become, if becoming there be, which some doubt, in the sense of the continuance of our distinct personalities? And whence, indeed, do we come? For if we arise out of no antecedent personal consciousness, it is at least possible that we may go back into the unconscious limbo of the unknown whence we came. Is Death something, or is it nothing to us? Does dissolution extinguish personal consciousness? If so, it is nothing to us. Or does it, on the other hand, set us free to an entrance into another and a higher life of personal being? Then does Death become the divine angel. Happy for us if we can so consider it.

There are indubitable perceptions in our minds of beings brighter and better than man. In the night season, in quiet reflection, these images visit us when we are unbesieged by the objects of sense. Whence can such images come? There is no place for them in the world, where is incessant mutation—one thing encroaching upon and impelling the other. They can only come from that spiritual world in which we ourselves obscurely have a share.

Whence come the ideas of Right and Wrong? Twist them about as you will, and tell me by which of the five senses the first elements of these notions come into the mind. Do you truly believe the assumption of our modern philosophers, that these ideas, now *a priori* in the man, are *a posteriori* in the race; from small rudimentary beginnings evolved in the course of the ages? If, indeed, they come from slow experience and reflection, from observing that one course of conduct produces painful effects, and another pleasing ones, then right and wrong do really become other terms for what are useful or injurious; virtue is another name for utility, justice for convenience, and conscience a balancing of advantage and disadvantage: a grave conclusion surely, and one that affects the foundation of our practical life.

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If the history of the origin of these ideas be uncertain, there is no question of their existence as two fundamental notions, absolute in their nature, and imperative in their obligation. They are, moreover, accompanied with a moral emotion, which, in the exercise of the highest disinterestedness, gives the profoundest delight that human creatures can experience. These lofty moral feelings find their completest development in the sphere of religion, and point out to us the region of a class of duties extending prospectively beyond the sphere of our present life to a destiny into the immeasurable futurity.

The benefit that we owe to these feelings is that they recall our attention again and again to the spontaneous working of our highest faculties; that they make known to us the treasury of emotions to which this working often gives rise; that they withdraw us from absorbing our whole attention in logical forms and processes, and point out to us the real and veritable existence of a spiritual world with which we are closely connected, to whose laws we are all subjected, and without which our highest reason, our instinctive faith, and our fondest aspirations would be a mockery and a delusion.

There is in man a source of power—a secret spring of action, of which every one is conscious, and upon the consciousness of which every one acts, that we call Self. In whatever light we view our nature we find such an invisible energy, not to be accounted for on any mechanical principles, playing the most important part in the whole of our conscious existence.

The most purely abstract idea, perhaps, which we can take of man is, that he is a force—a power sent into the universe to act its part on the stage of being. The Materialist views him as a mechanical force, created by chance, seeking mainly the preservation of its own organism, and accomplishing the destiny of a nature, which, strange to say, never had an intelligent or conscious designer. Philosophy, more enlarged, views him as an intellectual and a moral being, formed by the Power who is the centre and source of all intelligence, and endowed for the present with an organisation adapted to the material world around him. The great aim of his being, in this view of it, is to develop more and more the intellectual and moral energy of which his real and essential nature consists; to defend and succour the body indeed, as the organ of its present manifestation, but as that dies away, to prepare for a higher manifestation of intelligence and virtue to which his aspirations had ever been tending, and where his highest desires will be ultimately fulfilled.

It is true that there are differences—immense differences—in the single order of mankind. But in the greatest men we are able to celebrate, not especially dæmonic beings in whose presence we feel ourselves dependent and ashamed, but splendid flowers and



fruits of a tree of which we ourselves, too, are part. The bond which links the lowest and highest intelligence is only the nearest link of an infinite chain embracing all creatures. "From the rude Mongol to the starry Greek, who the fine link between the mortal made and Heaven's last Seraph?"

Were man, indeed, constituted as the lower animals, differing from them only in degree, not in kind, such a view but brings them nearer to him, not him to them. Of even the animal instincts of the brute, and of the lower forms of animal life, it cannot be affirmed, even less of them than of man, that they are acquired by experience, as that they are rooted in the organisation.

Consider the world of brute animals, to what startling reflections does it give rise! That we should have a race of beings round and about us, and know so little as we do of their state, their interests, and their destiny! They have passions, habits, and a certain accountableness; but whether they have any moral nature, whether they are under some punishment, or whether they are to live after this life, we do not know. We inflict great sufferings upon a portion of them; occasionally they retaliate. We use their labour; we eat their flesh. Is it not plain to our senses that we live in company with this world of inferior beings, without understanding what they are? We think that men are lords of them and of this earth. It is not so sure. This earth may have other lords than ourselves, with dominion even over us; nay, perhaps, it is the scene of a vaster conflict than we at present are capable of comprehending.

Traditions of such a conflict, reported from the most ancient histories, sacred and profane, and the theme of later fable and song—come down to us, singularly enough, side by side with the succeeding antagonistic doctrine of absorption in the universal spirit, accompanied by annihilation of personal being. But it is now known to us that the earliest writings of the Eastern peoples present Death as an immediate and happy re-union with those who had gone before.

Of the Origin of Religion, history tells us nothing. Except in the Mosaic narrative, there is no clear attempt at a theory of the origin of man. The origin of particular religions, however, lies within the domain of historic account. And it is remarkable that the testimony this affords is always to the same effect. It invariably shows a process of degradation. In religion, of all other things, the processes of evolution seem to work in that direction. Of no religion is this more true than of that which was associated with the oldest civilisation known to us—the civilisation of Egypt. The researches of the latest Egyptologists show that the earliest known forms of religion in that mystic land are the purest. So strange is the declension and subsequent combination here of simple and grand conceptions with grotesque symbols and with

degrading objects of immediate worship, that it has been the inexhaustible theme of curious explanations. Why a Snake or why a Dung-Beetle should have been taken to represent the Divine Being, and why in the most secret recesses of their solemn temples we discover enshrined as the object of adoration the image or the coffin of some bird, or beast, or reptile, is a question on which much learned ingenuity has been spent. Was it because there is an universal tendency in the human mind to developments in the lower direction, especially in its spiritual conceptions? "It is incontestably true," says M. Renouf (Hibbert Lectures, 1879), "that the sublimer portions of the Egyptian religion are not the comparatively late result of a process of development or elimination from the grosser. The sublimer portions are demonstrably ancient; and the last stage of the Egyptian religion, that known to the Greek and Latin writers, was by far the grossest and most corrupt."

So with the Hebrews. The Old Testament furnishes a continuous account of the lapses of the race from the teaching and influences of their Law-givers, Priests, and Prophets. Their very tradition of the Fall of Man from a higher estate is not without support in the present immediate consciousness of humanity, and in the physical facts of degradation, decay, and disintegration. And if we study what is now held by the disciples of Brahma, Buddha, Confucius, and Zoroaster, the same result is witnessed. In India, it has been one great business of Christian governors, in their endeavour to extinguish cruel and barbarous customs, to prove to the corrupt disciples of an ancient creed that its first teachers had never held the doctrines from which such customs arise, or that they are gross abuses of the doctrines really taught. That venerable hymnal of unknown antiquity, the Rig-Veda, which forms the great literary memorial of the early Aryans in India, presents to us a civilisation free from the degrading practices of later ages. Even the doctrine of transmigration was unknown to it. Nor was Death absorption into the universal whole, but an immediate transfer of personal life to a new and happier existence with the loved ones who had departed.

Whenever we can arrive at the original teaching of the known founders of religious systems, we find that teaching uniformly higher, more spiritual, than the teaching now. Christianity itself is no exception to this, but with the remarkable difference, that alone of all the historical religions of the world it has hitherto shown an unmistakable power of perennial revival and reform. We know that the processes of corruption had begun their work even in the life-time of the Apostles, and every existing Church in Christendom must equally admit the general fact, though each of them furnishes a somewhat different illustration of it. Mahomedanism, the latest of the great historical religions, shows a still

more remarkable phenomenon. The corruption in this case began not only in the life-time, but in the life itself of the prophet and founder of that religion. Mahomet was himself his own most corrupt disciple. Only when his voice was that of the solitary crying in the wilderness, before it was joined in chorus by the multitude, was his life comparatively pure and his doctrine spiritual.

A belief in the persistence of life after death, and the observation of religious practices founded upon this belief, may be discovered in every part of the world, in every age, and among men representing every degree and variety of culture. The habits of savages without a history are not in themselves evidence which can in any way be depended upon. To take for granted that what the savages now are, perhaps after millenniums of degradation, all other people must have been, and that modes of thought through which they are now passing, have been passed through normally by all the race, is a most unscientific assumption.

Of the Egyptians, their hopes and fears with reference to the world beyond the grave are revealed to us in various books or collections of writings which have been preserved to us by the tombs. From the very earliest times to which it is possible to go back, the Egyptians were acquainted with the use of the pen and of papyrus as a material for writing upon. There is probably not a Hebrew manuscript of the Old Testament which is a thousand years old. The oldest existing Sanscrit manuscripts were written only a few centuries ago. Some of our Egyptian papyri are not less than four thousand years old. The Egyptian manuscripts which we now possess, have been preserved by being kept from the air and damp in a perfectly dry climate. The literature which has thus been preserved and recovered is naturally for the most part of a religious character. The majority of the manuscripts which have been found in the tombs contain chapters of the collection generally known under the title of the Book of the Dead. It is not only in papyrus rolls that the Book of the Dead has been preserved. Many of the chapters are inscribed on coffins, mummies, sepulchral wrappings, statues, and the walls of tombs. The Beatification of the Dead is the main subject of every chapter. The everlasting life is represented as a renewed existence as upon Earth, but with the range of the entire universe in every desired shape and form. There is no trace to be found of the notion of an intermediate state of purification between death and final bliss. There is no indication of anything of an expiatory nature. There is a nether world which has to be traversed, full of terrible and hostile forces, but if the judgment which the departed has to undergo is favourable, he goes forth triumphant as a god whom nothing can harm. But the nature of the fearful

beings who preside over the terrors of the Egyptian nether world is not evil. Even these are ministers and angels of the divine justice. Sufficient is shown of the fate the wicked must expect. This fate is called "The Second Death."

As the Book of the Dead is the most ancient, so it is undoubtedly the most important of the sacred books of the Egyptians. In the later periods, another work, partly abridged from the Book of the Dead, was buried with their dead and placed under the left arm near the heart. This was called the "Book of the Breaths of Life." It contained precepts for giving new life to the soul and body. Another compendium of the Book of the Dead gives a sort of definition of the gods, in the following words: "The Becoming which is in the Becoming of all things when they become. . . . The cause of change in every thing that changes. . . . The mighty ones, the powerful ones, the beneficent, who test by their level the words of men, the Lords of Law, *who are without body*, who rule that which is born from the earth and that which is produced from the house of your cradles in heaven. . . . Ye prototypes of the image of all that exists, ye fathers and mothers of the solar orb, ye forms. . . . who generated men and shaped the form of every form, ye Lords of all things: hail to you, ye Lords of eternity and everlasting." Thus are the gods of Egypt described as the forces acting through the universe, in heaven and on earth, according to fixed and unchangeable law, for ever and ever.

A large number of hymns, beginning with the earliest days of the eighteenth dynasty (B.C. 1638, Bunsen), have come down to us. In these, while referring to a plurality of gods, the gods recognise the universal Lord. He gave birth to the gods. All things proceed from Him. In a papyrus at Turin, he is "the Almighty God, the self-existent, who made heaven and earth, the waters, the breath of life, fire, the gods, animals, cattle, reptiles, birds, fishes, kings, men and gods"—and who declares—"I am the maker of heaven and earth. I raise its mountains and the creatures which are upon it, I make the waters. . . . I am the maker of heaven. . . . It is I who have given to all the gods the soul which is in them." Another text says: "I am yesterday, I am to-day, I am to-morrow."

But the magnificent predicates of the one and only God, however recognised by the later Egyptian orthodoxy, never in fact led to actual Monotheism. They stopped short in Pantheism, or the doctrine that all individual things are nothing but modifications, affections of the One and All, the eternal and infinite God-world; that there is but one universal force in nature under different forms, in itself eternal and unchangeable.

The editor of the Litanies of the date of the nineteenth dynasty remarks of them that the pantheistic influence has told upon the

earlier ethical system. The notions of right and wrong, iniquity and sin, perpetually occurring in the Book of the Dead and in all the more ancient inscriptions, are modified to suit the later ideas. It is only out of condescension to popular language that pantheistic systems can recognise these notions. If everything really emanates from God in the general pantheistic sense, there can be no such thing as Sin. And the ablest philosophers who have been led to pantheistic views have vainly endeavoured to harmonise those views with what we understand by the nature of sin or moral evil.

Egypt was a powerful and highly civilised kingdom not less than 2,000 years before the birth of Moses, with religious beliefs and institutions which were not the mere worship of brutes as in the days of its decline. From the very first the Egyptians spoke of the Power by whom the whole physical and moral government of the universe is directed, upon whom each individual depends, and to whom he is responsible. Death with them was but the beginning of a new life, of a life that will never end. A sense of the Eternal and Infinite, Holy and Good, governing the world, and upon which we are dependent—of Right and Wrong and Retribution—such are the elements of the early Egyptian religion of the seers. Mythology came in and corrupted these elements. Poetry, and above all, the developments of Art, ministered to this corruption, by making permanent and visible the debased character of the popular notions. The conclusion which seems to have remained was, that all gods were in fact but names of the One who resided in them all. But this God is no other than Nature. Both individuals and entire nations may long continue to hold this view, without drawing the inevitable conclusion, that if there is no other God than this, the world is really without a God. But when the conclusion is once brought home, it is, as we have seen in modern times, most eagerly accepted. The fate, however, of a religion which involves such a conclusion, and with that conclusion the entire loss of faith in personal immortality, and even in the distinction of right and wrong, except as far as these are connected with ritual and social prescriptions, is inevitably sealed.

During the three centuries preceding Christianity, there was no philosophy amongst the Greeks and Romans that possessed a greater influence over the wealth and intellect of those peoples than that which Epicurus had founded upon the cosmology of Democritus. It dominated the mind of Lucretius, it was held by Julius Cæsar. But this extraordinary man, whose understanding led him to avow the doctrine—"when death comes, then we exist no more"—practically denied it by the arduous life he lived. He had not apparently much of that personal ambition which centres

everything towards Self. Nature had endowed him with force of character, and an intellect, though wanting in imagination, that gave him a clear vision of the circumstances about him. There is no fact more constant in the histories of great men than obedience to the internal law of their own organisations. In virtue of this,—just as the fatalist acts as though he were free,—Cæsar was compelled to contradict his nominal creed. What has the Epicurean to do with the affairs of the restless being, Man? With his belief, why should he attempt to vary, to compress, to compel that eternal order of things, in the vast ocean of which he is but an indistinguishable foam-bell? Yet, in the employments of mind and body, Cæsar was the most active public man of his time. What moved him thus? His career, terminating before Christianity appeared, had no chance of receiving that influence from it which has arisen in our days under the name of the Religion of Humanity. Cæsar was methodic, clear-sighted, persistent, and courageous in all his undertakings, but of a cold spirit. Yet he obeyed what the Athenian Sage had called his *dæmon*. To reduce the anarchy and chaos which he saw to be approaching the Roman world into order; to organise settled government; to extend privilege; to promote the arts, the sciences, and to afford the masses those means of public instruction by which they might, after some generations, become civilised;—such appear to have been the guiding principles of Cæsar's manhood. That of the men of his own time, he was best fitted to accomplish these ends, it may be affirmed that he well knew. But neither to him, nor to his destroyers, was it permitted to control their own fates. They played their parts, they quitted themselves like men; then, seized by the resistless Time-Spirit, their efforts passed into directions they wist not of. A new message from above was on the eve of being delivered to humanity, the dawn of a new social and spiritual life for the whole world was at hand.

The annihilation of the personality by death is an idea always more or less recurrent in European philosophy since the time of Epicurus; and amongst the ancients, as well as amongst those of our day, it appears in various tones, from solemn enthusiasm to indifference and even disdain. The passionate rejection of immortality by the elder Pliny is an example. "What accursed frenzy, to think that life is to be renewed by death! And where are those who have been brought into being ever to find rest, if the spirit retains its consciousness in the world on high, and the shade in the world below? Verily this sweet fancy wherewith men beguile themselves, deprives us of the chief blessing of nature, destroys death, and doubles the pain of dying by reflection on what is to be hereafter. For, even if present life is sweet, who can find it sweet to *have* lived? How much easier and surer were it for each to believe himself, and to take his experience of the time that

preceded his birth as an argument, that he need feel no anxiety for the future?"

And in the second and third centuries, the phrases, "To security," "To eternal rest," "To everlasting sleep," (*securitati, æternæ quieti, æterno somno*) are not unfrequently found on tomb-stones. The prospect of an utter end to existence seems to have been felt, by some of those times, as no gloomy idea, but as a welcome hope of unbroken and unending rest. In others, the sensuality of some aspects of Roman character is conspicuously displayed. "I was nothing: I am nothing: and thou who art alive, eat, drink, play, come." The epitaph of a savant of our own generation, W. K. Clifford, is not unlike this:—"I was not, and was conceived; I lived and did a little work; I am not, and grieve not." If that be true, then is Man indeed of all animals the most wretched. Doomed by irresistible, non-sentient forces to be born, to live by the sweat of his brow, to die, and there an end,—it is surely no superiority in him, no advantage that he is through the brief moment of life the only animal conscious of the thousand cares, anxieties, and miseries of his dreary lot. In Greek and Greco-Roman epitaphs the denial of immortality is less obvious perhaps, but the thought is turned backward to the life that is past, and seldom to the life that is to come, and the seriousness of the tomb becomes not incompatible with a note of cheerfulness and even of mirth. "And I also have in Arcadia lived" (*Et Ego in Arcadia vixi.*) Of the intellectual analysts of our own time, John Stuart Mill, while admitting the moral value of the expectation of life after death, is unable to receive it as a conviction. And he thinks that eventually mankind will learn to care less for the flattering hope of it, and become, in the long run, satisfied with living ideally in the life of those who are to follow them.

The well-known lines of George Eliot form, perhaps, the most touching presentment of the hopelessness of the future life that one of the finer minds of our own day has left to us. A subtle chord of mournfulness pervades them. The passionateness here is not, as with Pliny, for annihilation; but, on the contrary, for immortality. Noble and tender as these lines are, a cold analytical commentary entirely disintegrates them, and deprives the sentiment of all foundation:—

"O may I join the Choir invisible (*and also non-existent*)  
Of those immortal dead who live again (*in fancy only*)  
In minds made better by their presence, (*quite imaginary presence*) live  
In pulses stirred to generosity, (*by that sort of stimulus*)  
In deeds of daring rectitude, (*from such inspiration*) in scorn  
For miserable aims that end in Self, (*derived from what has no Self*)  
In thoughts sublime that pierce the night like stars, (*without any substantive reality*)

And with their mild persistence urge men's search  
To vaster issues. . . . (*persistence of force expended in limitless space*)  
. . . . This is life to come (*i.e. no life at all*).

Among the sages of antiquity, however, there were not

wanting those of the most famous whose inquiries had led them to expect the future life. "Let us not listen"—said Aristotle—"to those who tell us that we should have no interests except what are human and mortal like ourselves; but, so far as may be, put on immortality, and bend all our efforts towards living up to that element in our nature, which though small in compass, is in power and preciousness supreme."

And with his master, Plato, the idea of life after death was even linked by a subtle, poetic logic, to a life preceding birth. The secret of the Platonic doctrine of reminiscence is perhaps that the human spirit is an emanation, a breath, of the Universal Spirit, and for which cause, being unsubject to time, ever was, is, and will be. Nor does Plato confine his doctrine to man alone. With him, the universe, in its order, rhythm, and transcendent geometry, participates in the Divine mind, and is not dead, but alive. Living thought, as distinguished from mechanical necessity, pervades and directs the cosmos. All phenomena, therefore, spring from thought, as well as speak to thought. Blind force is inadmissible. The soul in us and the soul in the world apprehend each other because of their affinity of constitution. Thus intercourse between man and the universe is a communion of soul with soul, drawn together by the instinct of a divine kindred. The order of origination is never from the lower to the higher, (being different in this respect from the prevalent theory of evolution) but downward from the more perfect and comprehensive to the alloyed and limited. Every genesis of things is at once a manifestation of some divine essence, and a fall from it. Throughout the cosmos and its contents, all reality, all essence, all permanence must be looked for in the thoughts which it half-reveals, half-hides. So far as the universe is an object of cognisance, and not simply a source of sensations, it is an organism and hierarchy of ideas. The ideas are eternal, and pre-existent to their association with the forms in time and space. This is how we find the great controversy between Thought and Blind Force apprehended by Plato. He knew the choice was to be made, whether in the universe we are living in the grasp of an unconscious purpose, whether thought is the last result of blind force, or force the expression of conscious thought.

Insuperably difficult as it is rationally to conceive the emergence of conscious intellect and will from blind force, such is nevertheless the hypothesis of the Materialist. Nakedly put, his proposition is that inanimate, inorganic particles of the planet on the surface of which we live, do, under certain unknown conditions, and under unknown internal forces, produce life and thought. Intellect, the emotions and will, emerge from the material atoms of a cosmos in which they perceive none—which, to them, has none. It is a contradiction in thought.

The human mind may well grow weary of these contradic-



tions, and so resolve them by authoritative declarations,—the authority of which is but a shadowy substance,—yet each generation of men has to face them, and solve them as best it can.

Thousand to one, said Lessing, the goal of your philosophy will be the spot where you become weary of thinking any further. Our highest knowledge ends in the consciousness of an ignorance whose depths are profound. Yet there are things knowable. Let us endeavour to learn how far:—to indicate, rather, where analytical and logical knowledge, strictly speaking, ends, and the concrete mental synthesis of Belief has to come in.

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Upon the nature and laws which govern the operations of the human mind depends whatever certainty there is in human knowledge. Thus every department of human knowledge rests upon Psychology, or the science of the perceiving mind.

Truth, as necessary and universal, is not the creature of my volition; and reason, which, as the subject of truth, is also universal and necessary, is consequently impersonal. We see, therefore, by a light which is not ours, and reason is revelation in man of the Power that made him. The ideas of which we are conscious belong not to us, but to absolute intelligence.

We are here in the shoreless ocean of Metaphysics, and it may be well now to present and contrast briefly the cardinal views of three great systematic thinkers of the present century, Victor Cousin, Sir William Hamilton, and John Stuart Mill, on the subject before us.

With the first: To create, is not to make something out of nothing, for this is contradictory and inconceivable, but to originate from self. We ourselves create, as often as we exert our force, our will, our personality. The divine creation is of the same character: it is a manifestation of the Deity, but not the Deity absolutely in Himself; it is God passing into activity, but not exhausted in the act.

The universe created, the principles which determine the creation are found still to govern the worlds of matter and mind.

In the material universe, the law of Expansion is the movement of unity to variety; the law of Attraction is the return of variety to unity.

In the world of mind, the same analogy is apparent. The study of consciousness is psychology. Man is the microcosm of existence: consciousness, within a narrow focus, concentrates a knowledge of the universe and of God; psychology is thus the abstract of all science, human and divine.

In every act of consciousness we distinguish a self, and some-

thing different from self; each limited and modified by the other. At the same time we are conscious of a superior unity in which they are contained, and by which they are explained—a unity absolute as they are conditioned, substantive as they are phenomenal, and an infinite cause as they are finite causes. This unity is God. The fact of consciousness is thus a complex phenomenon, comprehending three several terms: 1st, the idea of the self and not-self as Finite; 2nd, the idea of something else as Infinite; and 3rd, the idea of the Relation of the finite element to the infinite. These elements are revealed, in themselves and in their mutual connection, in every act of primitive or spontaneous consciousness.

Reflection is subsequent, and distinguishes only. But as in the spontaneous intuition of reason, there is nothing voluntary, and, consequently, nothing personal; and as the truths which intelligence here discovers come not from ourselves; we are entitled, up to a certain point, to impose these truths on others as revelations from on high: while, on the contrary, reflection being wholly personal, it would be absurd to impose on others what is the fruit of our individual operations. Spontaneity is the principle of religion; reflection of philosophy. Men agree in spontaneity; they differ in reflection. The former is necessarily veracious; the latter is naturally delusive.

The condition of reflection being separation, occasions error, and a variety in error. It is the wayward development of the various elements of intelligence which determines the imperfections and varieties of individual character. Men under this partial and exclusive development are but fragments of that humanity which can only be fully realised in the harmonious evolution of all its principles. What reflection is to the individual, history is to the human race. The difference of an epoch consists exclusively in the partial development of some one element of intelligence in a prominent portion of mankind. And the results of these differences are Sensuism, Idealism, Scepticism, Mysticism, according as these partial elements prevail. The true philosophy is one which recognises the affirmations of all these elements, comprehends and unites them in the Eclectic Philosophy.

Such is a brief summary of the chief features of Victor Cousin's system—the philosophy of the Infinite and the Absolute—the Unconditioned, as it is termed in metaphysical language.

The critique of Sir William Hamilton on Cousin's philosophy is that the Unconditioned is unknowable and even inconceivable, unless under abstractions along which thought cannot move. In his opinion, "the mind can conceive, and consequently can know, only the limited, and the conditionally limited." This, of course, is to limit conception within the circle of knowledge. And he argues—"That our knowledge, whether of mind or matter, can be

nothing more than knowledge of the relative manifestations of an existence, which, in itself, it is our highest wisdom to recognise as beyond the reach of philosophy. . . . We are thus taught the salutary lesson, that the capacity of thought is not to be constituted into the measure of existence; and are warned from recognising the domain of our knowledge as necessarily co-extensive with the horizon of our faith. And, by a wonderful revelation, we are thus, in the very consciousness of our inability to conceive aught but the relative and the finite, inspired with a belief in the existence of something unconditioned, beyond the sphere of all comprehensible reality. The last and highest consecration of all true religion must be an altar—"To the unknown and unknowable God!" In this consummation, nature and revelation, paganism and Christianity, are at one."

To which John Stuart Mill in effect acutely remarks: That the very conceptions rejected by Hamilton as beyond knowledge, are subsequently received by him under the name of Belief. And he elucidates the logical weakness of Hamilton's position against Cousin in the following citation of Hamilton's own words;—"The sphere of our belief is much more extensive than the sphere of our knowledge, and therefore, when I deny that the Infinite can by us be known, I am far from denying that by us, it is, must, and ought to be believed. The original data of reason do not rest on reason, but are necessarily accepted by reason on the authority of what is beyond itself. These data are, therefore, in rigid propriety, Beliefs or Trusts. Thus it is that in the last resort we must perforce philosophically admit that belief is the primary condition of reason, and not reason the ultimate ground of belief."

Consequently, remarks Mill—"It thus appears that, in Sir William Hamilton's opinion, Belief is a conviction of higher authority than Knowledge; belief is ultimate, knowledge only derivative; knowledge itself finally rests on belief; natural beliefs are the sole warrant for all our knowledge."

This appears, of course, rather cogent as against the position taken by Hamilton against Cousin, and somewhat reduces the elaborate argument of the former. A careful observer of the triangular dialectic between the three philosophers will probably discern the pooriness of the implements they are fencing with—the inadequacy of conception and language to define the subject, so as to reason it out. But the point at which Mill leaves the question will be found, psychologically speaking, less satisfactory, because less comprehensive, than where it is placed by the other two. "I answer,"—says Mill,—“that the Infinite, which, as he (Hamilton) has so laboriously proved, cannot be known, neither is, must, nor ought to be believed; not because it cannot be known, but because there exists no such thing for us to know.”

"No such thing for us to know!" That proposition, however, begs the question. In Mill's own words—"Inconceivables are incessantly becoming conceivables as our experience becomes enlarged." To take an example or two from the physical sciences, the fact of an antipodes, with persons in that position; the motion of the earth round the sun, are familiar instances. Hamilton's proposition is that what is mentally inconceivable, is not, therefore, incredible. "To conceive," we know is used in two different senses, as an act of abstraction, a notion of the mind; or as a concrete, an image from experience. We make in conception sometimes a mental picture, sometimes an act of judgment. In the former, a round square cannot be conceived, in the latter we may conceive the forms of Egyptian architecture to be earlier in date than those of the Greek by comparison of the relation between them.

The difficulty of employing words as exact counters or correlatives of ideas and notions, is a constantly besetting one in Metaphysics. Hence it is that no process of argument is so perfect as that which is conducted by means of symbols. In Arithmetic 1 is 1, and just 1, and never anything else but 1; it is never 2, it has no tendency to change its meaning, and become 2; it has no portion, admixture, or quality of 2 in its meaning. And 6 under all circumstances is 3 times 2, and the sum of 2 and 4; nor can the whole world supply anything to throw doubt upon these elementary positions. It is not so with language. Take, by contrast, the word "inference": it may stand for the act of inferring, as dependent upon other propositions; or for the connecting principle between premisses and conclusions; or for the conclusion itself. And sometimes it will be difficult, in a particular sentence, to say which it bears of these three senses. And so again in Algebra,  $a$  is never  $x$ , or anything but  $a$ , wherever it is found. In Geometry also, the subjects of the argument, viz., points, lines, and surfaces, are precise creations of the mind, suggested indeed by external objects, but meaning nothing but what they are defined to mean.

The concrete matter of propositions is a constant source of trouble to syllogistic reasoning—the typical mode of comparing two given words separately with a third, and determining how they stand towards each other, in a *bona fide* identity of sense—as marring the simplicity and perfection of its process. Words which denote things, have innumerable implications; but in inferential exercises it is the very triumph of that clearness and hardness of head, which is the characteristic talent for the art, to have stripped them of all these connatural senses, to have drained them of that depth and breadth of associations which constitute their poetry, their rhetoric, and their historical

life, to have starved each term down till it has become the ghost of itself, and everywhere one and the same ghost, so that it may stand for just one unreal aspect of the concrete thing to which it properly belongs, for a relation, a generalisation, or other abstraction, for a notion neatly turned out of the laboratory of the mind, and sufficiently tamed and subdued, because existing only in a definition.

Such are the characteristics of reasoning, viewed as a science or scientific art, or inferential process, and we might anticipate that, narrow as is by necessity its field of view, for that reason its pretensions to be demonstrative were incontrovertible. In a certain sense they really are so; but then, on the other hand, this universal living scene of things is after all as little a logical world as it is a poetical; and, as it cannot without violence be exalted into poetical perfection, neither can it be attenuated into a logical formula. Abstract can only conduct to abstract; but we have need to attain by our reasonings to what is concrete; *i.e.*, the summation of a series of facts; and the margin between the abstract conclusions of logic, and the concrete of facts which we wish to ascertain, will be found to reduce the force of the inferential method from demonstration to the mere determination of the probable. Thus, whereas, Inference starts with conditions, as starting with premisses, here are two reasons why, when employed upon matters of fact, it can only conclude probabilities: first, because its premisses are assumed, not proved; and secondly, because its conclusions are abstract, and not concrete.

Logic then does not really prove; it enables us to join issue with others; it suggests ideas; it opens views; it maps out for us the lines of thought; it verifies negatively; it determines when differences of opinion are hopeless; and when and how far conclusions are probable; but for genuine proof in concrete matter we require an *organon* more delicate, more versatile, and elastic than verbal argumentation. Thought is too keen and manifold, its sources are too remote and hidden, its path too delicate, personal, and circuitous, its subject-matter too various and intricate, to admit the trammels of any language, of whatever subtlety and of whatever compass.

Nor is it any disparagement of formal reasonings thus to speak of them. That they cannot proceed beyond probabilities is most readily allowed by those who use them most. Philosophers, experimentalists, lawyers, in their several ways, have commonly the reputation of being, at least on moral and religious subjects, hard of belief; because, proceeding in the necessary investigation by the analytical method of verbal inference, they find within its limits no sufficient resources for attaining a conclusion. Even when in their own hearts they lean towards a conclusion, still often, from the habit of their minds, they are reluctant to own it,

and dwell upon the deficiencies of the evidence, or the possibility of error. There are men of very acute mind who do not know what they believe and what they do not, being by turns sceptics, inquirers, believers; who doubt, infer, assent, and doubt again according to the circumstances of the case. It cannot be denied that all these acts are natural to the mind; that in exercising them we are not violating the laws of our nature, as if they were in themselves an infirmity or extravagance, but are acting according to its normal constitution. Undoubtedly, it is possible, in the particular case, to err in the exercise of doubt, of inference, and of assent, but such errors of the individual belong to the individual, and cannot avail to forfeit for him his natural right, under proper circumstances, to doubt, to infer, or to assent. We do but fulfil our nature in so doing; and our duty is, not to abstain from the exercise of any function of our nature, but to do what is in itself right, rightly.

Every exercise of nature or of art is good in its place, and the uses of logical inference are manifold. It is the great principle of order in our thinking; it reduces a chaos into harmony; it catalogues the accumulations of knowledge; it maps out for us the relations of its separate departments; it puts us in the way to correct its own mistakes. It enables the independent intellects of many, acting and re-acting on each other, to bring their collective force to bear upon one and the same subject-matter, or the same question. If language is an inestimable gift to man, the logical faculty prepares it for our use. Though it does not go so far as to ascertain truth, still it teaches us the direction in which truth lies, and how propositions lie towards each other. Nor is it a slight benefit to know what is probable, and what is not so, what is needed for the proof of a point, what is wanting in a theory, how a theory hangs together, and what will follow if it be admitted. Though it does not itself discover the unknown, it is one principal way by which discoveries are made. A logical hypothesis is the means of holding facts together, explaining difficulties, and reconciling the imagination to what is strange.

With all this, inference is neither the last test of truth, nor the adequate basis of belief. Formal logical sequence is not in fact the method by which we are enabled to summarise what is the concrete, the subject as a whole. It is the cumulation of probabilities, independent of each other, arising out of the nature and circumstances of the particular case which is under review; probabilities too fine to avail separately, too subtle and circuitous to be convertible into syllogisms, too numerous and various for such conversions, even were they convertible—that gains our final assent. It is the mind that reasons, and that controls its own reasonings, not any technical apparatus of words and propositions. Great as are the services of language in enabling us to extend

the compass of our inferences, to test their validity, and to communicate them to others, still the mind itself is more versatile and vigorous than any of its works, of which language is one, and it is only under its penetrating and subtle action that the margin which intervenes between verbal argumentation and conclusions in the concrete, disappears.

According as language expresses things external to us, or our thoughts, the apprehension of it varies. The primary duty of a logician is to have clear conceptions, and to be accurate and intelligible in expressing them; but in philosophy, it is not so easy to accomplish this, by reason, oftentimes, of the intricacy and depth of its subject. No power of analysis is here sufficient to make psychology easy of understanding; if we are to read with any profit, we must throw our own minds into the matters under discussion, must accompany the treatment of them with an active, personal concurrence, and interpret, if requisite, for ourselves, the suggestions and adumbrations of the objects of thought, as images existing likewise in our own apprehensions. How little syllogisms have to do with the formation of opinions; how little depends upon the inferential proofs, and how much upon those pre-existing beliefs and views, in which men either already agree with each other, or hopelessly differ, before they begin to dispute, and which are hidden deep in our nature, or, it may be, in our personal peculiarities,—is seen in the common case, that the gravest conclusions are arrived at, not by any possible verbal enumeration of all the considerations, minute but abundant, delicate but effective, which unite towards them; but by a mental comprehension of the whole matter, and a discernment of its upshot, sometimes after much deliberation, but, it may be, by a clear and rapid act of the intellect, always, however, by an un-written summing-up, something like the summation of the terms, *plus* and *minus*, of an algebraical series. The mind is often unequal to a complete analysis of the motives which carry it on to a particular conclusion, and is swayed and determined by a body of proof, which it recognises only as a body, and not in its constituent parts. It so follows that what to one intellect is a proof is not so to another, and that the certitude of a proposition does properly consist in the certitude of the mind which contemplates it. And this of course may be said without prejudice to the objective truth or falsehood of propositions, because not all men distinguish or discriminate them in the same way. It will be our wisdom to avail ourselves of language, as far as it will go, but to aim mainly by means of it to stimulate, in those to whom we address ourselves, a mode of thinking and trains of thought similar to our own, leading them on by their own independent action, not by any syllogistic compulsion. Hence it is that an intellectual school will always have something of an esoteric character, for it is an

assemblage of minds that think ; their bond of unity is thought, and their words do not so much express thought, as symbolise it. To the mere barren intellect they are but the pale ghosts of notions ; but the trained imagination sees in them the representations of things. He who has once detected in his conscience the outline of a Power over the universe needs no definition of him. Such a one rejects the mechanism of logic, which cannot contain in its grasp a matter so real and recondite. Nor is it possible to limit the depth of meaning which he will attach to words, which to the many are but definitions and ideas. The methodical processes of inference, useful as they are, as far as they go, become then only instruments of the mind, and need, in order to their due exercise, that real ratiocination and present imagination which gives them a sense beyond their letter, and which, while acting through them, reaches to conclusions beyond and above them. Such a living *organon* is a personal gift, and not a mere method or calculus.\*

These conclusions, sometimes called beliefs, convictions, certitudes, are perhaps as rare as they are powerful. Till we have them, in spite of a full apprehension and assent in the field of notions, *we have no intellectual moorings*, and are at the mercy of impulses, fancies, and wandering lights, whether as regards personal conduct, social and political action, or religion. These beliefs, be they true or false in the particular case, form the mind out of which they grow, and impart to it a seriousness and manliness which inspires in other minds a confidence in its views, and is one secret of persuasiveness and influence in the public stage of the world. They create, as the case may be, heroes and saints, great leaders, statesmen, preachers, and reformers, the pioneers of discovery in science, visionaries, fanatics, knight-errants, demagogues, and adventurers. They have given to the world men of one idea, of immense energy, of adamant will, of revolutionary power. They kindle sympathies between man and man, and knit together the innumerable units which constitute a race and a nation. They become the principle of its political existence ; they impart to it homogeneity of thought and fellowship of purpose. They

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\* Thus Gerson (1363-1429) Chancellor of the University of Paris, reputed to have all the science of his time, remained unsatisfied with it, and found a refuge in the last resource of the highest minds, mysticism. That ordinary philosophy, which proceeds regularly by a train of arguments, was abandoned by him for the experimental knowledge which is based on immediate intuition. This knowledge, founded on experience, he took to be real, though not comprehended by those human beings to whom facts of this order have not been given. Only is this immediate intuition, with Gerson, worthy of the name of science, since it arrives directly from God by a spiritual influx which conveys to man his affinities with a higher order. This spiritual relationship requires no learning, can dispense with the acquaintance of literature, is found in all ages, in Egypt, in India, among the Jews, and with the learned Alexandrian mystics as with the illiterate shoemaker of the sixteenth century, Jacob Bohme.



have given form to the mediæval theocracy and to the Mahometan creed ; they are now the life both of "Holy Russia," and of that freedom of speech and action which is the special boast of Englishmen.

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Belief then, being concerned with things concrete, not abstract, which variously excite the mind from their moral and imaginative properties, has for its object, not only directly what is true, but inclusively what is beautiful, useful, admirable, heroic ; objects which kindle devotion, rouse the passions, and attach the affections ; and thus it leads the way to actions of every kind, to the establishment of principles, and the formation of character, and is thus again intimately connected with what is individual and personal.

Science gives us some grounds or premisses from which religious truths are to be enforced ; but it does not in practice set about inferring them, much less does it reach the inference—that is not its province. It brings before us phenomena, and leaves us, if we will, to call them works of design, wisdom, or benevolence ; and further still, if we will, to proceed to confess an Intelligent Creator. We have to take its facts, and to give them a meaning, and to draw our own conclusions from them. First comes knowledge, then a view, then reasoning, and then belief. This is why science has so little of a religious tendency ; deductions have no power of persuasion. The heart is commonly reached, not through the reason, but through the imagination, by means of direct impressions, by the testimony of facts and events, by history, by description. Persons influence us, voices melt us, looks subdue us, deeds inflame us. Many a man will live and die upon a belief ; no man will be a martyr for an inference. This is why theoretical religion is so little to be depended upon ; its doctrines are opinions. Logic makes but a sorry rhetoric with the multitude. Logicians are more set upon concluding rightly, than on right conclusions. They cannot see the end for the process. Few men have that power of mind which may hold fast and firmly a variety of thoughts. We ridicule "men of one idea," but a great many of us are born to be such, and we should be happier if we knew it. To most men argument makes the point in hand only more doubtful, and considerably less impressive. After all, man is *not* a reasoning animal ; he is a seeing, feeling, contemplating, acting animal.

In comparison with physical science, mathematical science belongs to a different category, because it deals, not with the objects given in the senses, but with abstract form. Take the axiomatic truth of pure mathematics. It is not through mere

sensation that you have arrived at it; neither is it an arbitrary relation of your own production; nor is it conceived of in pursuance of any resolution of your own will. Try as you may, you cannot alter the conceptions of pure reason even to an infinitesimal degree. Axiomatic truth has no element of personality in it. Magnitudes as conceived in geometry exist only mentally. In sense, a point which has no parts and no dimensions cannot be conceived. We can reason about a line as if it had no breadth, but we cannot conceive a line without breadth. The fundamental assumptions of geometry are, in the language of Kant, synthetical judgments *a priori*, i.e., are intuitions containing no adventitious element external to the mind itself. They are self-evident, require no demonstration, and are the foundation of all demonstration.

It is argued by John Mill that, though the universality and necessity of mathematical principles are, it is true, not gathered from experience of mathematical objects, which do not actually exist in nature, but are the products of reflection—this very reflection is suggested and originated *by* experience. This statement is not the whole truth of the matter. The fact that we have experience at all is determined by the organisation of our thinking, and the organisation exists *before* experience. Further, it is the primary condition of our experience.

Mathematical science cannot demonstrate its fundamental axioms: it must accept them as the base of its entire superstructure. The complaint, therefore, that belief or religion is rooted in mysteries, is only the same that can be argued against the science of number and space. The existence of God can no more be demonstrated, mathematically speaking, than can the fundamental assumptions of geometry. It requires, like them, to be postulated. It ultimately comes to this, that all human knowledge—mathematical, philosophical, or physical—for the whole *rationale* of the physical sciences is utterly dependent upon the limited constitution of the knowing instrument, whether then about nature and its quantitative relations in space, or about God—merges at last into common convictions which are undemonstrable, in the ordinary scientific meaning of the term.

So well has this been practically understood in all ages of the world, that no religion yet has been a religion of physics or of philosophy. It never has been a deduction from what we know; it has ever been an assertion of what we are to believe. It has never lived in a conclusion; it has ever been a message, a history, or a vision. No legislator ever dreamed of educating our moral nature by science or by argument. If men come to have no aspirations, then Benthamism may reign; but you will never perform by philosophy what once was done by religion. The ascendancy of faith may be impracticable for a time, but the reign of knowledge will prove unsatisfactory. If the great

problem for statesmen of this age is how to educate the masses, they must not look to literature and the arts and sciences alone for the solution. Even the old Greek and Roman polytheists had, as they show in their literature, clear and strong notions, nay, vivid mental images, of a Particular Providence, of the power of prayer, of the rule of Divine Governance, of the law of conscience, of sin and guilt, of expiation by means of sacrifices, and of future retribution: we may even add, of the Unity and Personality of the Supreme Being. This it is that throws such a magnificent light over the Homeric poems, the tragedies of Eschylus, Sophocles, and Euripides, and the odes of Pindar; and it has its counterpart in the philosophy of Socrates, Plato, and of the Stoics, and in such historians as Herodotus.

Let us consider, too, the real benefit which we owe to classic teaching in our schools and colleges. We know how differently young and old are affected by the words of some classic author, such as Homer or Horace. Passages, says Cardinal Newman, which to a boy, are but rhetorical commonplaces, neither better nor worse than a hundred others which any clever writer might supply, which he gets by heart and thinks very fine, and imitates, as he thinks, successfully, in his own flowing versification, at length come home to him, when long years have passed, and he has had experience of life, and pierce him, as if he had never before known them, with their sad earnestness and vivid exactness. Then he comes to understand how it is that lines, the birth of some chance morning or evening at an Ionian festival, or among the Sabine hills, have lasted generation after generation, for thousands of years, with a power over the mind, and a charm, which the current literature of his own day, with all its obvious advantages, is utterly unable to rival. Perhaps this is the reason of the mediæval opinion about Virgil, as if a prophet or magician; his single words and phrases, his pathetic half-lines, giving utterance as the voice of Nature herself, to that pain and weariness, yet hope of better things, which is the experience of her children in every time.

So, too, with our own national religious teaching in its length and breadth. It consists, not in rites and creeds, but mainly in having the Bible read in church, in the family, and in private. The reiteration again and again, in fixed course in the public service, of the words of inspired teachers, and that in grave majestic English, has in matter of fact been to our people a vast benefit. It has attuned their minds to religious thoughts; it has given them a high moral standard; especially it has impressed upon them the series of Divine Providences in behalf of man from his creation to his end. And to the disconsolate, the tempted, the perplexed, the suffering, there comes, by means of their very trials, an enlargement of thought, an inner light, which enables them to

see in it what they never saw before. Let a man's heart be ploughed by some keen grief or deep anxiety, and Scripture is a new book to him. Henceforth there is to him a reality in its teachings, which he recognises as an argument, and the best of arguments, for its divine origin. So again, do we owe to the great masters in literature, an impress of supernaturalism upon the popular mind. In *Macbeth*, in *Hamlet*, in the *Tempest*, the World-poet gives his vote for the life above nature. The *Divine Comedy*, the *Paradise Lost*, is all seer-ship, imagination shows again that there is no play-room for the highest efforts but the spiritual world.

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It is well now to come face to face with the inquiry, whether, if the formulas called "Matter" and "Force" are to be pronounced meaningless when abstracted from our perceptions of phenomena, the name of "God" after all, be more intelligible, when so viewed. If the one can be resolved into a mere residual *X*, must not the other. We cannot see, or touch, unphenomenal matter; but have we evidence, in sense or otherwise, for an unphenomenal Supreme Being? If both sets of terms are meaningless, what gain, or satisfaction to reason, is there in substituting one meaningless word for another meaningless word, which, on account of its meaninglessness, had been already dismissed? How, then are we to find, and what do we really mean by, the Supreme Power? Only by those two avenues, so to speak, the shows of sense and the internal workings of consciousness, can the question be answered. All proofs of religion, natural or revealed, must be derived either from the testimony of the senses, or from internal feelings of the mind, or from reasonings of which one or other of these sources supplied the premises. Religion, thus itself resting on the evidence of consciousness, cannot by itself be invoked to prove that consciousness ought to be believed. We must already trust our consciousness, before we can have any evidence of the truth of religion. We infer, from what we observe of and call the "laws of nature," a rational cause or Power which the phenomenal connections partly reveal and partly conceal. We come, then, to a *belief* in this cause or Power. And this faith in which we rest—for rest we must somewhere, unless the idea of cause be pursued *ad infinitum* and there lost—is only the final outcome of the same lower faith or latent reason which leads us to presuppose, in all experimental investigations, significance and interpretability. If the object of the man of science is to seek for causes, it is an imperative upon the mind to go further than these, beyond the sphere of physical causation, to the cause which is efficient and

final. Experimental science, however, is concerned with the phenomenal only—that is to say, with orderly effects. It has nothing to do with, and its speculations are vain upon the uncaused and unphenomenal Power on which the phenomenal order depends, and to which the whole is at last to be referred.

It is no argument to say that because we cannot “see God,” His existence or being is not to be believed in. In a strict sense, we cannot even see our fellow men. The real *I* and *YOU* have to be inferred, for it will not be contended that our bodies are ourselves. We are accustomed, indeed, and rightly, to speak of the Creator Himself as incomprehensible; and, indeed, He is so by an incommunicable attribute; but in a certain sense each of His creatures is incomprehensible to us also, in the sense that no one has a perfect understanding of them but He. We recognise and appropriate aspects of them, and logic is useful to us in registering these aspects and what they imply; but it does not give us to know even one individual being. We have no sense-phenomenal knowledge whatever of *Spirit*. If, then, we may habitually attribute spirit to our fellow men, may we not go further, and say that “God” is more than a meaningless name, and mean by that word the eternally sustaining Spirit—the active conscious Reason of the universe? For of the existence of such a Spirit we have the same *sort* of proof as we have of the existence of other conscious agents like ourselves. As a matter of fact, we never see another human spirit, even when his body, as a phenomenal thing, is present to our senses; we can only perceive the visible and tangible appearances, behind which inference obliges us to recognise an invisible individual spirit, numerically different from our own. And different not only numerically, but in all that such individual beings severally are, in identity, in incommunicability, in personality.

If, then, we implicitly trust the phenomena of sense, when discharging their function of thus making us aware of the existence of other human spirits of the same order as ourselves, why should we distrust their exercise of an analogous office, in revealing to us the being of the Supreme Spirit embodied in the physical laws of nature, always present, universal so far as our knowledge extends, and differing from the acts of finite human spirits, which move only within a very circumscribed sphere?

But then, it may be urged, this analogical reasoning can carry us only to an inadequate conclusion. It suggests, indeed, that we are now in the presence of a Power that operates according to rules, but it contains no assurance that the ordered phenomenal changes will continue, in similar orderly co-existences and successions; still less that the Power is trustworthy and perfect. Why

may not our whole experience be due to the operation of a malignant contriver who finds pleasure in our temporary delusions, and through whose influence our trust in him is only a continuous deception, a crafty "nourishment of blind hopes to spice the meal of life with?" \*

In the presence of the evil which we see both in ourselves as well as in nature—the mystery of which is, not that it never seems to come or approach to an end, but that it should ever have had a beginning—the physical line is a line too short to fathom the immense abyss of the mystery of it. This analogy does not yield the evidence that we are not the sport of a malignant Being, neither does it satisfy us that the Power under which we live is an omnipotent one. For if that Power be omnipotent, then to our limited reasonings is this evil decreed and fixed as fate.

The outlook thus far appears discouraging. But it is only when all other resources fail, that the spiritual nature of man begins to speak to him—the consciousness of that inward evidence which to the individual soul is stronger argument than extrinsic logical proof. "Though He slay me" were the words of Job, "yet will I trust in Him." In this mortal state, experience requires us to be content for a while with such glimpses of truth as are vouchsafed to our condition. We are embodied in consonance and relation to the things around us. Mind is conditioned by the constitution of our bodies. There is a mind of the body as well as a mind of the spirit. These two minds are not unfrequently at warfare—always ought to be so to the extent of subjecting the lower to the higher—each striving for ascendancy. Too frequently we do what the spiritual Ego revolts against. And we witness the same warfare going on in Nature as in ourselves. But to the reasonableness of man's final trust in the beneficence of the Power that placed him here each generation contributes. It is the final support of every individual rational act and process. It re-erects itself after every assault upon it. It is the foundation of everything for which men admire and revere what is excellent, noble, and aspiring in their race. It places us in real communion with what is above us, is not only the moral and spiritual support of the present life, but the guarantee of the future. It is the only abiding Belief that has power to console us under the restraints and reflected visions that disturb us, and it gives finally to each man the assurance that passes all understanding

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\* "So impressed were the minds of both the Mills, father and son, with the phenomena in Nature and Life hostile to man, that the only form of belief in the supernatural which seemed to them clear of intellectual contradiction was the Zoroastrian and Manichean principle which regards the Deity as not omnipotent, but as at constant warfare with an Evil Power for the mastery of things. In this view, man himself becomes a fellow-combatant with the Highest Powers, a soldier in the ranks of one or other of two great opposing armies."

and knowledge, that if we will but harken and obey the Voice within, all will yet be well with us.

In appealing to the testimony of Conscience, we know there are those who will not recognise its validity; but there are no truths or facts of this sort which are not disputed by some schools of philosophy or some bodies of men. It must nevertheless be considered sufficient if the principles or facts assumed have a largely preponderating following. This condition is abundantly fulfilled as regards the authority of conscience:—that conscience is the voice of God has almost grown into a proverb. This is recognised both by the young and the uneducated, by the religious and the irreligious—in spite of ever-recurring aberrations from it, and the stiflings of its oracles. It is proclaimed in the history and literature of nations; it has had supporters in all ages, places, creeds, forms of social life, professions, and classes. It has held its ground under great intellectual and moral disadvantages; it has recovered its supremacy, and ultimately triumphed in the minds of those who had rebelled against it. Even philosophers, who have been antagonists on other points, agree in recognising the universal voice of that solemn Monitor, personal, peremptory, unargumative, irresponsible, minatory, definitive.

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The Materialist will yet ask, What need is there to postulate an abstract and undemonstrable God as the motive Power of all the phenomena we perceive? Why not be content simply with what the perceptions undeniably and likewise abstractly give, Matter and Force? The answer is, Look abroad then; observe in the world we inhabit the evidence of the formative principle, which, out of the mineral elements, and by the agencies of light and heat, produces the cell that yields the varied uses and immeasurable variety and beauty of the plant and the forest; re-corporates the vegetable matter, and from the albuminous ovum converts it into structure, muscle, nerve and brain; evolves the fish, the reptile, the lion, the eagle, Man. Extend the range of vision; behold circles on circles, systems of other worlds, grouped, poised in space, propelled and kept in regular orbits under mysterious laws;—and, seeing all this, say, Which is the more credible to the mind of man, that this stupendous cosmos should exist of itself, or be the work and manifestation of some Sustaining Power, inhering, underlying all phenomena, and of whose adumbration we ourselves are immediately conscious in the workings and emotions of our own minds.

The consciousness of an Inscrutable Power, manifested to us through all phenomena, grows ever clearer, and that while the conviction of such a Power certainly exists—there is no real *rationale* of things without it—its nature transcends all conception, intuition, and is beyond the reach of imagination. It may be conceded that the worship of such a Power must, in its highest form, be “for the most part of the silent sort”—silent not only as to the spoken word, but silent as to the mental conception also. For the mental kind of difficulty as to the postulate of a Self-Existent Universe, applies also to a Self-Existent Creator, with this important distinction, that the latter accords with psychological facts and intuitions, and the former does not. It ends in the abyss of Pantheism, where the Ego ceases to exist.

The existence of God cannot possibly be given to us simply by an external revelation. All revelation proceeds from the *fact* of His existence as given in reason and consciousness. A well-founded religion, therefore, affirms the grounds of religious belief, and subjects the facts of our spiritual nature to investigation, as well as any other part of our mental phenomena. The history of the mind, and the history of humanity, all tend to show some connection with a Power conscious of itself, without which man is a problem utterly inexplicable. And though it must be admitted that the same questions in philosophy come up ever and ever again, and remain ever unsolved, there is still a perceptible evolution constantly going on of the true principles of human knowledge and progress, and some advancement made towards a more comprehensive elucidation of the great questions of man's nature and destiny. Human reason, practically, however, can only grasp what lies nearest. It cannot penetrate the darkness of the remote future. There we must be guided by a sense of duty, trust in God, resistance to selfish thoughts.

The veracity of Revelation, as far as our convictions go, *must* rest upon what goes on in the mind. From all the evidences of it, we decide what is valid and what is not, and thence draw our inferences from as wide a survey as we are able to command respecting its truth. The instrument for performing this is our reasoning faculty, our intuition. There can be no certainty in revelation if there be none in consciousness. To elevate, therefore, revelation above reason, is to undermine the authority of the former, and leads to popular scepticism. The first and fundamental revelation to us is in the constitution of our minds.

The existence of God and of the personal immortality of the spirit enclosed in humanity, lie in the very depths of our moral nature, and in the assurance, despite all intellectual difficulties, that we are responsible agents as far as our wills are concerned.



If our individual moral nature be annihilated, as it must be in any thorough-going scheme of necessity, every conclusion, every law established upon it must be annihilated likewise. Society itself, in such a case, is deprived of its very, and indeed its only, foundation.

The personality of God as displayed in the Hebrew documents exhibits the relations of the human family with the Creator in the language of human affections, leading to that conception of the divine attributes in human forms which is termed anthropomorphism. All abstractions, all philosophical notions, are hostile to this view. Yet in this view above all others we find a continuous record of God's dealings with man. Christianity, in particular, presents as the type of the highest conceptions of the subject,—the image of a Divine Humanity, the history of a perfect Spiritual Life, and the profoundly comforting idea of the Fatherhood of God.

We have to believe and act upon much that we cannot comprehend; and our belief and practice must take such a form as is adapted to the constitution of our own minds, even though that form be related to a possible ultimate truth which our present faculties are unable to seize. Hence it is that ideas and images which do not represent God as He is may nevertheless represent Him to us as is our duty to regard Him. They are not in themselves absolutely true; but we have nevertheless to act upon the truth contained in them. A finite mind can form no conception of an Infinite Being which shall be speculatively true, for it must represent the infinite under finite forms; nevertheless, a conception which is speculatively inadequate, may be adequate to regulate our conduct.

Such a regulative truth may be designed, not to satisfy our reason to the full, but to guide our practice; not to tell us what God is, but how He wills that we should think of Him. It is useless to deny in theory what we are compelled to acknowledge in practice. Pantheism and anthropomorphism (using the latter term in its widest sense) are the two alternatives of human thought about God. If we aspire to comprehend the infinite, we are drawn by inevitable consequence into the negation of pantheism. If we represent the Deity under finite symbols, these must be drawn from the phenomena of consciousness, and be thus based upon a more or less refined and elevated anthropomorphism. And anthropomorphism of this kind is one that meets us in almost every page of the Bible. No one can fail to observe therein how constantly the Almighty appears, in communicating to His creatures, to place both Himself and them upon what may, humanly speaking, be called a lower level than that on which even the natural reason of man would be inclined to exhibit Him. We are not then called upon to aspire to the most exalted conceptions which an imperfect mind even can form of a Being of in-

finite Power ; nor are we told to feel and act towards God as towards a Being who is above listening to us. On the contrary, He is shown to us as a Father, who, though rigidly just and awful, is ever open and wishful to receive the prayers and supplications of His children.

That difficulties, and even contradictions, visible in ourselves and in the course and constitution of nature, beset this view, and that these are insoluble by reason, must, of course, be admitted. But, looking to the internal facts of consciousness, and the laws and regulations which govern things on this planet, and the ascertained relations of our earth to the other worlds around us, we may reasonably infer and believe that the portion of knowledge which our limited faculties can attain to, though it be but partial truth, is not absolute falsehood. Accordingly, we may seize firmly this principle of guidance, and act, so far as we can, upon it, that intellectually as well as morally, this present life is a discipline and preparation for another.

We may believe that God hears and answers prayer. We may believe also that with Him is no variableness, neither shadow of turning. So again, we may believe equally in man's free-will and in God's foreknowledge, though in all these contradictions the human reason is wholly inoperative to explain them. The infinite, the absolute, is not an object of human reason at all. Nor can any Revelation tell us what God is in Himself, but only under what accommodations He can be represented to our limited faculties. Revelation, therefore, must be adapted to the constitution of its human recipient. Such an adaptation apparently implies the existence of a more absolute form of truth, related to a more perfect intelligence. But we conceive this only as the condition of an intelligence which is not ours. Thus we become prepared for intellectual difficulties beyond our power to solve. Our practical concern, then, lies rather with the partial forms under which the invisible things of God have been made discernible to the eye of man,—forms which we are to accept as regulatively true for the purpose of our own intellectual and moral training during this present life, though we cannot determine how much of them is speculatively true for every form of intelligence, and how much is relative and dependent upon the laws of human consciousness.

Thus step by step in contemplation, man is led to that last and highest communion with his Maker, where language ceases, and prayer itself becomes absorbed in awful adoration :—that distinctive act which is the simple feeling of the eternal relation of the soul to the all-pervading Cause of the universe. This act is man's direct intercourse with God ; an act, not of habit and tradition, or ever invented by men of wisdom for the good of mankind, but the very primitive and native impulse of the soul, directing itself, by inward irresistible power, to the magnetic centre of all spirits,

the pulsation of eternal life during man's pilgrimage through a world of shadows, the divine witness of his connection with, and glad dependence upon his Creator.

It is incompatible to conceive the present life as a discipline and preparation for the next, if we are to believe that our future consciousness will be exempt from the law of succession, that personal consciousness will not be continued. A state of future existence under no conditions which we can figure to ourselves of human consciousness or human personality is utterly unmeaning, is an irrational blank. As George Chapman puts it,—

"Since if what here we learn we there should lose,  
Our immortality were not Life, but Time."

Existence is indeed a mystery, but not without an apparent purpose. Our moral and intellectual nature is the better for the unsuccessful attempt to penetrate it. In our moral life we aim at a goal we can never reach. The ideal of duty still flies from us as we pursue it, still shines afar off the higher we ascend. And it is the same with the trials of the intellect. To disparage or condemn Philosophy because no man has solved its riddle, or can solve it, is as absurd as to condemn Morality because no man has reached or can reach perfection. The exercise of any faculty of our nature upon its proper object is even here its own utility and its own reward. Our faculties were given us that we should exercise them, and the very consciousness of their limitations urges us on to the furthest employment of them.

All that experience conveys to us is finite, yet it enables us to conceive its opposite, the infinite. The perception of phenomena gives the idea of Being, and from Being we are carried to the foundation of all Being; from that which exists dependently, to that which exists in itself. "I am all that was, and is, and is to be, and my veil hath no mortal lifted up." Such was the sublime inscription which the philosopher-priests of Egypt engraved on the fane of Isis, their symbol of the Infinite.

But, it will be asked, can the Infinite and the Finite *be* together? Is the Finite an additional kind of Being to the Infinite, or is it not? Is the sum of Being contained in the Infinite and the Finite together greater than either of its terms taken separately, or is it not? If it is, we fall into supposing a greater than the Infinite. If it is not, the gulf of Pantheism yawns before us; that the Infinite *alone* exists; that the Finite is but a mode and manifestation of the one only Being. Yet Pantheism offers no satisfactory escape from the dilemma; inasmuch as it contradicts the whole testimony of personal consciousness. The Pantheist tells me that I have not a real distinct existence and unity of my own; but that I am merely a phenomenal manifestation, or rather

an aggregate of many manifestations, of the One Infinite Being. Yet, in the many affections to which I am aware I am subject, I am conscious of my own personal being and unity, and cannot be argued out of it. And if personal existence *for a while* be compatible with Pantheism, that personal existence may last *for ever*.

Of course, it can be said, that the assumption of personal being is a delusion; it cannot be proved. We know it cannot be proved; but this is not a fact that stands alone. No matter of fact, no truth relating to things without the mind, no organum of physical science, can possibly be matter of demonstration. If any man professes to demonstrate either physical or metaphysical truths with the same kind of certainty as a proposition of Euclid, that man may be set down at once as ignorant of what he is talking about. The propositions of Euclid are demonstrable, precisely because their objects have no external existence, but are purely mental forms. And though the Positivist will tell you there exists nothing in nature but phenomena; that dreaming theorists have invented Being out of their own consciousness and experience, that does not account for the fact of its having been originated and produced there.

The most vital lesson of philosophy—a knowledge of the limits of the human reason—which underlies the whole fabric of Kant's teaching, was forgotten by those of his successors, who, like Hegel, produced a gigantic scheme of Intellectual Pantheism, in which human reason, and human consciousness in general, are merged in the processes of the Infinite mind; in which Thought is at the same time Creation, or the "immediate exhibition of God's self-determination to Being." The history of philosophy in Germany, since Kant, carries this lesson and warning to the thinkers of the present time: There is no resting place for a Religion of the understanding but Pantheism or Atheism. And Pantheism is, for all religious purposes, identical with Atheism; for if there is no God, whom are we to worship? And if all things are God, who is to worship Him? Both end equally in negation. Pantheism is a denial of the personality of man as well as of the personality of God. For if man can only conceive the absolute by being himself the absolute; if, from the finite struggling after the infinite, he becomes the infinite contemplating himself, every process of that infinite is equally divine, equally true, and equally false; or rather, equally indifferent; for difference is limitation, and limitation belongs to the finite. If God is the all that exists, whether represented as universal substance, as universal cause, as universal law, as universal thought, or in any other form of conscious or unconscious being, He thinks all that is thought, He does all that is done. There can be no intellectual difference between truth and falsehood; for God is the only thinker, and all thoughts are equally necessary

and equally divine. There can be no moral difference between right and wrong; for God is the only agent, and all acts are equally necessary and equally divine. Thus Spinoza, in his *Ethica*, asserts that whatever operates is determined by God; and maintains that evil results only from the inadequacy of our ideas.

If, then, we renounce the inquiry into the Absolute as vain, do we therefore renounce Philosophy. By no means, but we limit its office. The true philosophy considers the world of human thought as subject to such limitations as our human constitution imposes. The questions that consciousness can ask, consciousness may attempt to solve; those that lie beyond the definite range of consciousness cannot even be asked intelligibly. Our powers of answering are indeed limited; but so are our powers of questioning; and the same finite nature which admits us but to a partial knowledge of truth, also gives us but a partial insight into difficulties.

The essence of the Absolute and Infinite is incomprehensible—nay, inconceivable. We may believe that the Absolute exists; the *why* and *how* of that existence we cannot know. Finite thought implies effort; infinite thought excludes it. Finite thought is displayed under the form of time; infinite thought carries us into eternity where time is not. It is bounded by none of the conditions of an imperfect intelligence; by nothing of limit, or time, or space, or succession, consequently by nothing of memory, or reason, or induction, or by any of those human intermediaries between an infinite truth and a finite thought;—it is not tormented by those laborious operations which are the confusion of our understandings. And it is nobler and more rational to believe in this than in the grovelling materialism which begins and ends in the deification of the empirical laws of nature—laws that are affirmed to be the offspring and outcome of a Force or Power blind and unconscious of its own operations.

Whatever doubt or obscurity may hang over the objects of metaphysical conceptions as things, thus much at least is clear, that such conceptions exist as thoughts in the human mind; that they have always existed and occupied the attention of the highest minds of all ages and of all countries; that they must be accepted as facts of our inner consciousness, and be explained according to the laws of our intellectual constitution. And this consideration points at once to the source from which alone a solution of our difficulties may be attempted. We must commence with that which we have and know, not with that which we have not, and may never know. Instead of projecting the mind into the regions



Which, be they what they may,  
 Are yet the fountain light of all our day,  
 Are yet a master light of all our seeing ;  
 Uphold us, cherish, and have power to make  
 Our noisy years seem moments in the being  
 Of the eternal Silence : truths that wake,  
     To perish never ;  
 Which neither listlessness, nor mad endeavour,  
     Nor all that is at enmity with joy  
 Can utterly abolish or destroy :  
 Hence in a season of calm weather,  
     Though inland far we be,  
 Our souls have sight of that immortal sea  
 Which brought us hither,  
     Can in a moment travel thither,  
 And see the children sport upon the shore,  
 And hear the mighty waters rolling evermore."



# The Basis of Physics.

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"We are yet only at the threshold of the palace of truth, which succeeding generations will range over as their own ; a world of scientific inquiry, in which, *not matter only, and its properties*, but the far more rich and complex relations of life and thought, of passion and motive, of interest and action, will come to be regarded as its legitimate objects."—SIR JOHN HERSCHEL.

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As the sciences are at present studied, from without inwards, nothing but phenomena can be registered ; and while the field grows wider and wider, and classifications are made out, the student, surveying his discoveries, would fain forget that their scope is still only of phenomena, and that living causes are not indicated in his process. But in some moment of his triumph, sooner or later with different minds, he puts the life of his own imagination into his *systema mundi*, his theory of the world.

"Cells," says Buchner (*Force and Matter, Preface to the 1st edition*)—"are, under our own eyes, developed from cells in the most natural way ; and, presupposing the existence of a first organic element,"—(the empiricist can never go far without a bold hypothesis)—"there is not much difficulty in believing that the whole organic world was developed out of itself, without the assistance of a peculiar organic force." It may here be noted, that when our ultra-scientific gentlemen enter into the domain of belief, they become as dogmatic as the old theologians. And their hastiness of inference is exemplified in the continuation of the *Preface* under quotation—"It is certainly unknown in what way the spontaneous generation of the first organic form was established, but it seems clear to us that this generation was natural, and arose under peculiar external circumstances."

The question of spontaneous generation has been and is the object of much controversy. The Harveian dictum, *Omne vivum ex ovo*, is still the declaration of the cautious empiricist.\* On the

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\*The dictum of the grandfather of Charles Darwin, Erasmus, (of *Botanic Garden*, &c. fame) was *Omnia ex Conchis* (all from oysters).



other hand, the view of St. Augustine is speculatively noticeable, as being definitely related to the doctrine of Buchner, Haeckel, Huxley, Tyndall, Clifford, and Bastian,—the evolution of the organic world from the inorganic. Augustine taught that from the beginning of the world there had existed two kinds of seeds of living beings; visible ones, which the Creator had placed in animals and plants, that each might bring forth after its kind; and invisible ones, which are concealed in all elements, and become active only under certain conditions of combination and temperature. It is these invisible seeds, latent in the elements from the first, which produce plants and animals in great numbers, without any co-operation of existing organisms.

On the narrower question of the Origin of Species, Darwin's theory of Natural Selection was experimentally supported by the analogies of an exceedingly small number of examples of Artificial Selection, which it was inferred repeated in a comparatively short period the work for which the ordinary course of Nature requires thousands of years. But the cardinal point of difference in species is not here noted. Take two pigeons' eggs, one of which contains an individual possessing the hereditary disposition to tumble in the air; the other as like the same individual as possible, but without this disposition. Where now lies the difference? It can no longer come from without: it must lurk in the egg; but how we do not know. All that we see is that this likeness of external appearance is infinitely removed from essential likeness. Haeckel's theory is that the differences lie in the chemical mixture, in the molecular composition of the albuminous combination of carbon, of which the egg essentially consists. The inquirer may get from such an explanation what knowledge he can. But what gives the impulse to these differences? What makes the materials so develop and arrange themselves this way and that? In vain does chemistry grope for an answer. If an extreme Darwinism would refer all differences to natural selection, without any co-operation whatever of internal causes of development, as a scientific theory this is obviously inadequate. That man, for example, has been raised from a lower animal type by internal development is a theory more advanced. The emergence, in that case, of the idea of the "ego" must be regarded as the true moment of the creation of Man. On this theory, the earlier history of man would indicate a common stock from which, on one side, tending upwards, man branched off; and on the other, persisting in the lower animal form, the anthropoid ape. This theory, however, is not the same as that which produces man *from* the anthropoid ape. The latter species may in contradistinction be said to be one of Nature's many failures. On general grounds, it is unaccountable that species should have *commenced* from natural selection—selection from

what? From *Bathybius*, primitive slime? For such is the final residuum of the analysis. The theory seems to require the postulate of the existence of *some* species to commence with.

Evolution, as the record of observed phenomena, is perfectly legitimate. Geology with millions of years is as acceptable as geology of seven days. The one point is, that science be a notebook of classified phenomena always acknowledged to be phenomena, and not causes; the whole sum of these no more causal than the first instance was. But of late, geology has been worked on the hypothesis that the present wear and tear of Nature, the action of air, fire, and water on a great scale, and the rules or laws of that action, are the only field that the geologist need enter; and this is perhaps true so far as the knowledge of the earth's crust is concerned. The detritus of animal and vegetable life is of course included in the causes of physical change, as also is the action of light and heat, and of what are called the imponderable fluids. But out of this wide, useful grasp of Nature there comes forth the doctrine that these same surface causes which age by age give the world a new hard coat, or an earth mould from the castings of worms, and the like, are the only causes that have played from the beginning: that there is change of materials, but no creation; in short, that there is no beginning, but geological time is infinite. Between geology and this hypothesis there is a great gulf fixed. The geology is for the most part true and good, and follows recognised signs and changes in the earth. The hypothesis is—hypothesis. From the changes that we know to have taken place in the structure of the earth, we may infer that by some concurrence of atoms, its original appearance in time occurred, and, as far as we can judge, by a sporadic or abrupt act; for the substance produced, that is to say, the atoms which form its material substratum bear from their uniformity of constitution all the marks of being manufactured articles. It is, indeed, quite allowable to work the thought that the changes of to-day are the same in character with those which have been proceeding for any needful number of years; and thus to discover how much that looks immense and violent may be accounted for by long times and persistent agencies. For example, a sea bottom may be rising a foot in a hundred years, until in a calculable time it becomes dry land. But when the leap is made that all planetary contingencies have been thus created, the word creation startles and rouses another and higher mind. Is it likely that wear and tear, and internal uneasiness are the Creator? Is there not another order in the nature of things; an order which has another kind of beginning. If there is, geology does not reach it, or touch the hem of its garment. It need not do so, but if its hypothesis attacks that other order, it quits its own domain, and is no longer geology, but Anti-Theos.

The function of hypothesis, nevertheless, is one which must be reckoned absolutely indispensable to science. When Newton said "*hypotheses non fingo*," it did not mean that he deprived himself of the facilities of investigation afforded by the assuming, in the first instance, what he thought he would be ultimately able to prove. Without such assumptions, science could never have attained its present state: they are necessary steps in the progress to something more certain; and nearly everything important which is now theory was once hypothesis. Even in purely experimental investigations, some inducement is necessary for trying one experiment rather than another. The doctrine now universally received, that the earth is a natural magnet, was originally an hypothesis of the celebrated Gilbert. Mr. Charles Darwin's remarkable speculation on the Origin of Species is another unimpeachable example of a legitimate hypothesis. But Mr. Darwin has never pretended that his doctrine was proved.

The Scientific analysis does not discriminate the objective from the subjective aspects of phenomena. Though its immediate inquiry be to discover the *how* and not the *why*, it fails to reach any absolute result. Look, for instance, at the brain. How can this pulpy grey matter be credited with thought? You must know the whole mechanism before you can rightly interpret the action of a part. You must understand the source of the life in it before you can interpret its function. In looking optically at the brain you contemplate the mechanism on its objective side only; it is a material mass, and its actions are molecular movements and changes. If you ask, How can these material movements be feelings and thoughts? there is no answer. Dissect an eye with the utmost accuracy, and you will never even divine, still less ascertain, from such dissection that it is capable of responding to the stimulus of light. Contemplate an ovum, and you will never gather that this microscopic cell is capable of developing into a complex and gigantic animal. Inference suggests the eye to be the organ of sight, and the ovum to be the starting point of an organism. But we must know these facts to commence with before we can read them in our observations of eye and ovum. What does this mean? It means that the data which have been studied apart must be reconstructed by a synthesis before we reach an explanation. Our knowledge respecting the sentient mechanism is so wretchedly imperfect, that, were it a hundred-fold enlarged, it would still be nothing more than watching a printing machine in operation, which would disclose how the sheets of paper were laid on the types, and removed after the roller had passed over them, but would tell us nothing of how the types were set up, nor what was the significance of the printed words. If our phy-

biological knowledge of organisms were amplified to any conceivable extent, it would still be incompetent to furnish an explanation of moral sentiments and intellectual conceptions, of the exactitudes of Science and of the creations of Art.

From these considerations it appears that the facts of Observation have to be interpreted in terms of consciousness. The necessity arises of completing objective observation by subjective introspection. Mental processes and organic processes are not to be concluded as wholly distinct and separate, but rather, as two different aspects of one and the same thing. Introspection is also observation, differing only in that the phenomena observed are subjective states or feelings, and not objective states or changes in what we externally perceive. We observe changes in the internal phenomena, not less than changes in those external. You may limit the claims of introspection; but you cannot deny their validity.

Kant said, and truly, that the elements of inner observation cannot really be isolated and recombined at will, after the manner of physical or chemical observation. We have no microscope, balance, and re-agent, to see what is too minute for the unassisted eye, to measure what is quantitative, to test what is compound in mental processes: our closest observation is *interpretation*. Even the observations of external data have all to be interpreted, and their value lies wholly in the interpretation.

We are not, then, to loosen our hold of the indispensable instrument Introspection, because it is limited in its range. It needs the co-operation of Observation; but both are indispensable; both have the same common ground in the sentient organism. The feelings externalised, and ideally connected with an external order or not-self, constitute objective consciousness in the perception of states, changes, results. The object or thing perceived is a group of feelings, occasioned in us, we may believe, by a common, uniform *substance* in the great whole—Nature. The perception itself, as a subjective state, is also a group of feelings, having its ground in the same *substance*. The identity of the substance is common to both.

Looking inwards, the observer can only be aware of what passes in his own mind; but psychology is a science of the human mind in general, not of any individual mind. No science can be founded on single specimens: it formulates general laws, not particular cases. The individual observer has his idiosyncrasies, peculiarities belonging to his organism and education; these have to be reduced to law. The individual consciousness, therefore, is not a complete standard; it is only material for science in so far as it is in general agreement with the consciousness of fellow-men. But neither in the individual nor with the general mass of men is the standard a fixed or unvarying one. Quite in the contrary, it

is subject to fluctuations of ascent and descent. At various stages in the history of mankind, beings have been born in humanity of extraordinary influences in both directions.

On the whole it seems more consonant with the interpretation of facts that Mind is not a function of the organism, but something like an entity operating on and through the organism. This entity deliberates, chooses. No one supposes, however, that our *desires* are absolutely free. Such freedom as there is rather consists in the conflict of desires, and the choice is determined often by the predominance of the most urgent; nevertheless, the fact remains that the choice is not always without a reservation of an internal disapproval to which we ascribe the name of conscience. We are free only in the sense that we have a range of motives surveyed by a Personality which is the incorporation of our past experience, and carries the prevision of alternative futures. Personality intervenes to shape our conduct: an abiding sense of our dignity, or of our duty, suffices to restrain all the solicitations which are seen to be inconsistent with it. But we cannot gather either that our motives are unconditioned, or that consciousness, self, personality, is unconditioned. The question that remains is—What are the conditions? It is the task of the psychologist—the province of the future science—to discover them.

While the order and genesis of mental facts are not wholly laid bare to introspection, their significance is wholly hid from observation. The physiologist could not stir a step in interpreting the facts of the sentient mechanism were he not necessarily translating them into the facts of Feeling. Without the illumination of introspection he could see nothing but molecular movements in nerve processes.

The most recent scientific treatises on Biology are conspicuously occupied with nerve cells, fibres, and centres. The knowledge that has hitherto been reached of the structure and functions of the nervous system, does not, however, appear sufficient to afford any secure data for deduction. The attempts at localising particular functions in portions of the nervous system are far from assuring. Confident statements which credit certain nerve-cells with the power of transforming impressions into sensations, and other cells with the power of transforming those sensations into ideas—assigning Volition to one centre, Sensation to another, Perception to a third, and Emotion to a fourth, seem to have much the same sort of hypothetical value as the assumptions of Phrenology. Anatomical and physiological investigation of the nerve-cells can throw no more light on the nature of Mind than investigating the molecular structure of iron rails will explain the railway system.

The researches of various eminent writers of the Darwinian school are obviously biassed by a lurking desire to establish the *identity* of animal and human nature—a desire consequent on the re-action against the irrational efforts of theologians and metaphysicians to sever human nature from all *community* with animal nature. They have insisted so strongly on the intelligence of animals that they have overlooked the conspicuous differences in their conditions and in the results from these. For Mr. Darwin's purpose it was needful that he should emphasise the position that there is no fundamental difference between man and the higher animals in their mental faculties. But animals can only be said to have the germs of our moral and intellectual life in somewhat the same sense as serpents have the rudiments of our limbs. Because limbs are seen always to be vertebral appendages, the inference is too sweeping that limbs exist *in posse* wherever a vertebral column exists. Granting the close resemblance between the organs and functions of animals and men, we have still to allow for the patent, conspicuous, and remarkable differences.

Biologists have ceased to isolate man from Nature, and they have been followed by psychologists who have ceased to isolate man from the animals. Observation has revealed more and more of the similarity in the structure and functions of men and animals. But there is need rather of warning against exaggerating the interpretations of these resemblances. On the whole, the weight of authority, of evidence, and reason, decides that man is separated through his mental faculties by an impassable barrier from all the lower animals.

It has been thought a great achievement of Kant to have separated the form of knowledge from the matter of knowledge, and to have made the first the *à priori* condition of both knowledge and experience. We may adopt his phrase that "all knowledge has its rise *in* experience, but not all *out of* experience," as conveying a distinction always to be kept in the investigations into Mind. Mind, however, is of the nature of an abstraction, a term; once extricated from the concrete facts of sentience, it is by logical necessity immaterial: it is a symbol or idea like Virtue, Cause, Number, &c. Observation shows that we do not bring on our entrance into the world definite notions of space, nor do our first sensible impressions call forth such notions; some of those first impressions are, on the contrary, wholly at variance with the facts.

Mind, nevertheless, is not to be explained on the favourite scientific hypotheses of vibrations, wave-movements, chemical or electrical processes, cell-functions, seats of sensation, seats of emotion, seats of volition, seats of thought. These hypotheses of the nervous system under the examen of anatomy and physiology

are mere fanciful guess work. They are really not terms of knowledge at all, but terms to fill up our gaps in knowledge. Sensations can neither be seen, nor touched. Between the physical and psychological moments we know there intervenes a change in the sensory tract; but what that change is we do not know. We know, however, that it is not a process which can be identified with the physical process. Between the structure of the eye and ear and the sensation of sight and sound, there is a demonstrable connection. Between these organs and the nervous system there is likewise a demonstrable connection, any interruption of which brings an interruption in the functional operation. So far physiology reaches; but there its grasp relaxes. No variation, in structure or movement, uniformly corresponds with a variation in feeling. Between the structure of the brain, or any other portion of the central system, and the sensations, perceptions, ideas, which are its activities, no connection is discernible.

In the general field of animal psychology as well as physiology, much may be learned from the observations of the lower animals in regard to their sense-perceptions. Moleschott points out that a vorticella with an eye possessing only a cornea must receive different pictures of objects from the spider, which possesses also lenses and a corpora vitrea.

Indeed, the relation of the senses to the external world lies at the very foundation of all empirical investigation. It leads us at once to an examination of the physiology of the sense-organs. "When we believe," says Lichtenburg, "that we see things, we only see ourselves. We can, properly speaking, know nothing of anything in the world except ourselves and the changes that take place in us."

Men, however, find it astonishingly difficult to recognise in their own body, which is to them the type of all reality, a mere scheme of representation, a product of our optical apparatus. "The body only an optical instrument, nay, itself only an optical image like the rest of what we see! Why, we have the immediate sense of our own reality! Away with such idle speculations! Who will deny that this is my hand, which I move with my will, and whose sensations are so immediately given to my consciousness?"

To these ebullitions of common sense it is readily replied that a man born blind has, nevertheless, his own knowledge of the world of matter, and that this knowledge is not identical in representation with the representation of the man who has natural eyesight. Difficult, indeed, is it for men even of scientific capacity to recognise really and truly the subjective element in our sense-perceptions, and by far the greater number of our present physicists seem unable to rise to this stand-point. And the reason

would almost seem to be an apprehension that their belief in the known reality of material things might be shaken by an inquiry into the means by which we construct the world of these things. It is unquestionable that colours, sounds, smells, &c., do not belong solely to things in themselves, but, to us, are peculiar forms of excitation of our sensibility, called forth by outer phenomena. Our sense-organs are therefore organs of abstraction; they give us some important effects which do not even exist in the objects themselves. What the poet says of absorption in intuition, of abstraction in contemplation, is physiologically and psychologically more correct than the ordinary projection-theory of scientific observation.

Thus it becomes clear that the sense-world is partly, if not chiefly, a product of our own organisation; that our visible bodily organs are, like all other parts of the phenomenal world, only pictures of an unknown object, that the core or basis of our organisation remains just as unknown to us as the things that act upon it. We have always before us merely the product of both. What is Body? What is Matter? What is the Physical? Modern physiology, just as much as philosophy, must answer that they are all only representations, necessary ideas, ideas resulting according to natural laws, but still never the things themselves. We are within reason if we pre-suppose physical conditions for everything, even for the mechanism of thinking. We are equally in reason when we regard not only the outer world as it appears to us, but also the organs with which we conceive it, as mere images of the really existent. With all this, we have still to inquire how far it is probable that the phenomenal world is different from the world of things which occasion it. Sun, Moon, and Stars, with their regular motions, Earth and Air, together with the whole Universe, in part, forms of our interior! "What a piece of work, then, is Man: how infinite in reason, how noble in faculty, in form and apprehension, how like a God!"

Knowledge, then, it would seem, is least possible about the outside of things that can be seen, handled, and tasted. The powers of observation that connect man with the external world are derived from a secret, all-pervading, pre-established harmony between the two. And the connection would appear to be so secret that those powers enable us only to see, but not to penetrate, the source of it. "In short," says Carlyle,—in his remarkable way—"with every theory the man who knows something about, knows mainly this—that there is much uncertainty in it, great darkness about it, extending down to an infinite deep; in a word, that he does not know what it is. Let him take a stone, for example, the pebble that is under his feet; he knows that it is a



stone broken out of rocks old as the creation, but what that pebble is he knows not; he knows nothing at all about that. This system of making a theory about everything is what we may call an enchanted state of mind. That man should be misled, that he should be deprived of knowing the truth that the world is a reality, and not a huge confused hypothesis; that he should be deprived of this by the very faculties given him to understand it, I can call by no other name than ENCHANTMENT."

Science depends so much upon empirical observation and experiment—"mechanical manipulation, falsely called Science" (again Carlyle)—as to cause attention to be almost directed to these processes as the agents of its progress. It should not be forgotten, however, that the triumphs of scientific research owe less to outward observation than to philosophical thinking. All fundamental questions in physics rest finally upon the thinking instrument itself; its nature, qualities, and limitations. It neither satisfies our reason, nor expresses our whole knowledge of the external world to say, that all we can do is to classify the facts of external observation. The faculties that enable us to grasp these facts and co-ordinate them assuredly hold the superior place, as without them, knowledge is impossible. The whole *ratione* of the physical sciences is utterly dependent upon the nature of the knowing instrument, the Mind itself. There only are to be found its grounds of certitude. Instead, therefore, of entirely separating the investigation of physical from that of mental phenomena, we are bound to have regard to their mutual relations. It is useless to say that we know the properties of the external world because we have sensations which convey them; for what are sensations but particular states of our own being. A sensation is known simply in Consciousness; the material conditions of it only, as seen in the particular organ and the nervous system, by observation. But no one can ever see a sensation, or be conscious of the organic action. The acutest search of the physiologist entirely fails to discover anything at all analogous to a thought or emotion, which are simple facts of consciousness; while, on the other hand, the functions only of our organs are phenomena of observation.

Whatever be the nature of the real existence we are compelled to acknowledge in Mind, the Mind is, like everything else, only known to us phenomenally as the series of its feelings or states of consciousness. That we are mentally able to separate, and even to oppose, Matter and Mind, though it is not sufficient to prove the reality of their separate existence, at all events favours it. The reproach of the empiricist against the metaphysician that the latter founds his system upon Thoughts instead of Facts, while he, on the contrary, draws all his deductions from the facts themselves, omits to take regard that every deduction in itself is a process of thinking.

When it becomes perfectly apprehended that our perceptions do not order themselves according to the things perceived, but that those things, on the contrary, range and present themselves according to our perceptions, a feeling of insecurity arises as to the platform on which the physical sciences are worked and displayed. The greatest antinomies of thought, its very contradictions and paralyses, such as the infinity of space, the eternity of time, the impregnability of atoms, the constant unalterable quantity of force in the universe, are the last supports of the table of the laboratory on which the physicists operate. So strong is this feeling of insecurity with those who think with Hume, that they distrust the veracity of man's natural faculties, incline to disbelieve all conclusions as having no real basis. It is clear, however, that the ground, the very nature, of Hume's famous argument invalidates its own conclusiveness. If the mind is not to be trusted in the inquiry after certitude, of what worth is the result of that inquiry?

Admitting, however, that we can have no idea of an object except as it is perceived, that the *Esse* of objects to us is *Percipi*, it is not necessary to go so far as Berkeley, that objects exist *only* as ideas. We have no proof whatever of our perceptions being the absolute standard of things *existent*; the proof extends no further than to the things *known*. But it by no means follows that they cannot exist otherwise. We are thus brought face to face with the doctrine of the relativity of our knowledge. The foundation of Berkeley's idealism leads up to this limitation, that whatever is not perceived, does not exist: that existence is bounded within the circle of perception. It may fairly be demurred to such a proposition, that many things exist beyond the reach of human perception. Berkeley and his school, however, while denying the absolute reality of natural objects perceptible to man, take for granted the absolute existence of *other minds*. But see to what this leads. If we grant the absolute and independent existence of minds other than our own, we cannot refuse to grant the absolute and independent existence of rocks and trees. I, James, have no direct, immediate knowledge of or commerce with Alexander's mind, only through his body: before I can infer the absolute existence of his mind, I must begin by recognising the absolute existence of his body; and when once I have done that, how can I refuse the same sort of absolute existence to rocks and trees?

But Sensation is no open door through which external things, as they are, can wander into us. It is a process by which the appearance of things arises within us. That in this process all the properties of these "things" come from without, and the man who receives them contributes nothing, contradicts all the analogy of

nature in the case of a development of any one thing from the co-operation of two others. The fact that we have perceptions at all is determined beforehand by our organisation, and this organisation conditions those perceptions.

In truth, Materialism, resting as we see on perception, as a speculative system entirely loses its validity. The Idealist, in dealing with the objective facts of science, everywhere employs the same conceptions and methods as the Materialist, but what to the latter is final and definite truth is to the former only the necessary result of our organisation. It is no answer to the Idealist to say that this result, in part, of our organisation is the only thing about which we need concern ourselves. Such an answer does not take into account the conceptions, the processes, the demands of the Mind. We have the conviction that something lies at the bottom of these ideas and of the world arising from them that does not spring from ourselves. This conviction rests essentially upon the fact that we discover between things not merely a Connection, but also a Co-operation, which goes on irrespective of our thought, and which acts upon us ourselves and subjects us to its laws. We have before us in the laws of Nature not merely laws of our own knowledge, but also evidences of *something else*, of a power that now compels us and now is dominated by us—a sort of mutual determinism. In our commerce with this power we are dependent upon experience. No speculation has ever found the means of penetrating by the magic of pure thought into the substantive world.

Science denies the existence of immaterial substances, ignoring the analogies that lead in that direction. Compare, for example, the matter which can be touched, with the electric fluid, with light, heat, magnetism, gravitation. For anything we know the analogy may continue much further. The action of the scientific man to clear a space before him from which all mystery shall vanish is well enough as far as his line of vision extends. But the mystery, after all, is only put further back. The essential problems of matter, life, and mind, still remain untouched under his method. It may readily be conceded to him that man is a Natural Product like all other organic beings, with properties, faculties, and powers educed from experience and inheritance, and with relations and likenesses of structure, function, and propensities to the lower animals, obvious more than enough to any man who goes about with his eyes open, and needing no Huxley to point them out—without in the least impairing his theoretical connection with another and a higher order of beings invisible to his senses. As opposed to metaphysical speculations transcending the limits of knowledge, it may be admitted that Materialism, as a counterpoise,

becomes a needful benefit. It lacks relations, however, to the highest functions of the free human spirit. As a system, it finally rests upon the assumption, expressed mathematically, that  $a$ , the external world as perceived by our particular organs= $A$ , the external world which subsists independently of us, and which also is conceivably and actually different to other organisations. The principle, then, that  $a=A$ , is postulated as an act of the mind, a primitive synthesis. Materialism has its roots, therefore, in Idealism.

Now we see how great the difference is between the consideration of an absolute existent and substantive world of reality, and of any object conceived on the theories of physics; what enormous and incalculable variations the object undergoes when it passes from one medium, with its effects, into another. The contest for supremacy between what we call Body and what we call Mind ends in favour of the latter, and only thus is guaranteed the true unity of existence. For while it always remains an insurmountable difficulty for Materialism to explain how conscious sensations come about from material motions, by what means or process, subject and object coalesce in perception; yet it is, on the other hand, not difficult to conceive that our whole representation of matter and its movements is the result of an organisation of purely intellectual dispositions to sensation. We may admit so far the Materialism implied in the principle that Mind is a Permanent Possibility of Sensation, because we know that sensation is normally accompanied by Consciousness.

What, then, is Consciousness? We can only know of it through its operations. Consciousness—the inward fact of the mind's own operations and feelings, cannot be disbelieved without doubting that we feel what we do feel. If consciousness tells me that I have a certain thought or sensation, I assuredly have that thought or sensation; consciousness, in an extended sense, is but another word for intuitive knowledge.

We can only know through the capacities of knowing. All knowledge rests in the last result upon the reach and value of these faculties, call them by whatever generic name you like—spirit, reason, mind, intelligence, understanding. From these faculties, logic, morals, politics, science, art, philosophy, religion take their rise. In a word, man is implied in everything which is felt and known. Consciousness is the witness to whatever goes on in this internal world. And its experiences are facts as valid, as certain, as sure,—nay, more certain, more sure than any observations afforded by the senses of the external world.

The place of the natural sciences is thus in what we may call the external mind. And hence, in spite of the exactitude of this great field, it stands apart from the problems of right and wrongdoing, of good and evil. Amid the array of external phenomena in which, objectively, we are hardly a distinguishable speck, we may discern that the Power whose fiat brings us into being requires at our peril the kind of life we are to live, and breathes into the order of our brief existence the degrees of a spirit which is above all varieties of circumstance and time. The truths of the conduct of life, the knowledge that accompanies the heart and mind and conscience, with none of the exactitude of definition or foot-rule, *are of kingly certainty compared to scientific facts, and theories, however universal, of matter and space.* Man, in his consciousness, is made up of awful certainties for himself, compared to which scientific truths, even those of the widest range, and commanded by theories however perfect, are but changeful shadows.



